Department of Energy
Oak Ridge Operations
Office of Environmental Management
Procedure

STARTUP AND RESTART OF OAK RIDGE RESERVATION ENVIRONMENTAL MANAGEMENT PROGRAM WORK

EM – 2.1
Revision 1

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ACRONYMS

AMEM	Assistant Manager for Environmental Management
CA	Corrective Action
CAP	Corrective Action Plan
COR	Contracting Officer's Representative
CRAD	Criteria and Review Approach Document
DOE	U. S. Department of Energy
EM	Office of Environmental Management
FRR	Field Readiness Review
HQ	Headquarters
MCR	Minimum Core Requirement
MSA	Management Self Assessment
ORO	Oak Ridge Operations Office
ORR	Operational Readiness Review
PM	Program Manager
POA	Plan-of-Action
RA	Readiness Assessment
SNR	Startup Notification Report
TSAD	Technical Support & Assessment Division

1.0 PURPOSE

The purpose of this procedure is to define a systematic process for verification of the readiness of U. S. Department of Energy, Oak Ridge Operations, Office of Environmental Management (ORO EM) program work on the Oak Ridge Reservation and surrounding areas before it is started or restarted. This procedure will specify when an Operational Readiness Review is required for startup or restart of nuclear facilities, and also provide guidance for alternative readiness verifications prior to startup or restart of other EM program work (e.g., for non-nuclear, radiological, and other industrial facilities/activities).

2.0 SCOPE

This procedure describes the process that will be used by ORO EM to verify readiness. The procedure provides guidance for: (1) identification of work startups and restarts that require a DOE ORO review, (2) selection of the type of readiness verification review required, (3) review planning, (4) review implementation, (5) review reporting, and (6) corrective action (CA) follow-up.

Three types of readiness verification reviews are addressed in this procedure:

[1] Operational Readiness Reviews (ORRs);
[2] Readiness Assessments (RAs); and
[3] Field Readiness Reviews (FRRs).

The selection of the review type depends on the specific startup or restart operation and the potential hazards associated with it.

For hazard category 1, 2, and 3 nuclear facilities, EM will fully adhere to the requirements of the latest revision of DOE Order 425.1C for startup and restart of nuclear facilities during all such reviews.

This procedure applies to the startup or restart of all EM program work for the ORO Reservation and surrounding areas. This procedure applies to all facility categories, i.e., nuclear (including all hazard classifications, e.g., Category 1, 2, and 3 nuclear facilities), radiological, non-nuclear, and other industrial.

Although the procedure applies to all EM program work, this does not imply that all facilities/activities will require a formal readiness verification review (i.e., ORR, RA, or FRR, prior to startup or restart). The procedure defines the framework by which facilities/activities are evaluated in the planning stage to determine if a formal review is required. In some cases, the normal startup or restart verification processes of the contractor's Program Manager (PM), working with EM's PM are adequate for safe and effective startup or restart; no additional independent review is required. In other cases, formal independent contractor, and DOE reviews are mandated by the applicable directives (policies, orders, guides, manuals, standards), for example, Order DOE O 425.1C. In certain instances, an independent review may be requested by those at various levels of responsibility to provide additional assurance of safety.

3.0 REFERENCES AND DEFINITIONS

3.1 References

3.1.1 DOE, 2003, DOE Order DOE O 425.1C, *Startup and Restart of Nuclear Facilities*, Washington, D.C.

3.1.2 DOE, 2000, DOE Standard DOE-STD-3006-2000, *Planning and Conduct of Operational Readiness Reviews* (ORR), Washington, D.C.

3.1.3 DOE, 1992, DOE Order DOE O 5480.19. Chg. 1, *Conduct of Operations Requirements for DOE Facilities*, Washington, D.C.

3.1.4 DOE, 1997, DOE Standard DOE-STD-1027-92, Chg., 1, *Hazard Categorization and Safety Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports*, Washington, D.C.

3.1.5. DOE, 1998, DOE -STD-1120-98, *Integration of Environment Safety, and Health into Disposition Activities,* Washington, D.C.

3.2 Definitions

3.2.1 Corrective Actions (CAs): Measures taken to correct the direct contributing and root causes of deficiencies such that the deficiencies will no longer exist or recur.

3.2.2 Facility: Those activities, processes, or operations that involve materials in such form, quantity, or concentration that a hazard potentially exists to employees, the public, or the environment.

3.2.3 Facility Type: The type of facility is one of four types:

3.2.3.1 Nuclear facility (category 1, 2, or 3): A facility which contains enough radioactive material to warrant special controls in the operation involving this material. These are defined as:

[1] Hazard Category 1: The Hazard Analysis shows the potential for significant off-site consequences if there is an unmitigated release of radioactive materials from the facility.

[2] Hazard Category 2: The Hazard Analysis shows the potential for significant on-site consequences, see DOE Standard DOE-STD-1027-92, Table 3.1 and Table A.1.

[3] Hazard Category 3: The Hazard Analysis shows the potential for only significant localized consequences see DOE-STD-1027-92, Table 3.1 and Table A.1.

3.2.3.2 Radiological facility: This is a nuclear facility that contains less than a Hazard Category 3 amount of radioactive material.

3.2.3.3 Non-nuclear facility: Those activities, processes, or operations that may involve hazardous substances in such forms or concentration that a potential danger exists to cause illness, injury, or death to personnel within the facility site boundary or members of the public.

3.2.3.4 Other Industrial: Those activities, processes, or operations that may involve hazardous substances in such forms or concentration that a potential danger exists to cause illness, injury, or death to personnel within the facility site boundary.

3.2.4 Field Readiness Review (FRR): An EM review conducted by DOE Line management for non-nuclear or other industrial facilities. Need for an FRR is determined by the DOE line management when additional assurance of readiness beyond the contractor readiness review is desired.

3.2.5 Field Readiness Review (FRR) Plan: A structured review plan that is prepared and implemented for FRRs that identifies all of the necessary criteria and review approaches required for the determination of readiness to safely startup and operate the specified facility.

3.2.6 Implementation Plan: A structured review plan that is prepared and implemented for an ORR or RA, per DOE Order DOE O 425.1C, that identifies all of the necessary criteria and review approaches required for the determination of readiness to safely startup and operate the specified facility. This plan is consistent with the breadth defined in the Plan of Action (POA) and the specific facility involved.

3.2.7 Management Self Assessment (MSA): An internal review conducted by the line organization for the purpose of confirming readiness.

3.2.8 Minimum Core Requirement (MCR): A fundamental area or topic of review evaluated during an ORR or RA to assess whether a facility can be operated safely. The core requirements are subdivided into core objectives to facilitate definition of the breadth of readiness reviews and to facilitate development of review criteria. Core requirements are prescribed in DOE Order DOE O 425.1C.

3.2.9 Nuclear Facility Hazard Category: The category of a nuclear facility determined by the quantity, type, and release potential of the nuclear material present. Nuclear facilities may be either Category 1, 2, 3, or radiological (less than category 3).

3.2.10 Operational Readiness Review (ORR): A disciplined, systematic, documented, performance-based examination of facilities, equipment, personnel, procedures, and management control systems to ensure that a facility will be operated safely within its approved safety envelope as defined by the facility safety basis. This is the highest level of readiness verification review. A four step process is implemented for the ORR including a Management Self Assessment (MSA) by the contractor's line management; contractor independent ORR; EM MSA (optional); and the DOE ORR.

3.2.11 Plan-of-Action (POA): The document prepared in advance of an ORR/RA which describes the breadth and the prerequisites of the readiness review and identifies the review team leader. POAs are required only for ORR and RAs.

3.2.12 Prerequisites: Specific conditions identified in the POA that must be met prior to the start of the RA/ORR.

3.2.13 Program Work: Work on a facility that is accomplished to further the goals of the facility mission and/or program for which the facility is operated. Program work is not accomplished when a facility is shut down. It does not include work that would be required to maintain the facility in a safe shutdown condition, minimize radioactive

material storage, or accomplish modifications and correct deficiencies required before program work can recommence.

3.2.14 Readiness Assessment (RA): A review that is conducted to verify readiness to startup or restart a nuclear facility when an ORR is not. There is a three step process for implementing RAs: the contractor conducts an independent RA, the contractor declares their readiness to startup or restart, and EM conducts an independent RA.

3.2.15 Readiness-to-Proceed Letter: The formal document submitted by the contractor which certifies the conclusion that the facility is prepared to start or resume operations.

3.2.16 Restart: The recommencement of program work. Restarts requiring an ORR can occur in operating facilities if the process to be resumed meets the requirements for an ORR. This can be true even if the same program work is ongoing in some other portion of the operating facility.

3.2.17 Startup: The initial operation of a facility or process to perform program work.

3.2.18 Startup Notification Report (SNR): A quarterly report by the contractor to identify all known future EM facility starts and restarts for category 1, 2 and 3 nuclear facilities.

3.2.19 Unplanned Shutdown: The termination of program work at a facility for any cause, such as equipment malfunction, personal error, or on-shift operator response to indications or situations that would have unsafe consequences without shutdown.

4.0 ROLES AND RESPONSIBILITIES

All applicable roles and responsibilities are defined in this procedure in conjunction with the specific actions that various EM and contractor staff have responsibility for implementing.

5.0 PROCEDURE

5.1 Determining the Need for a Startup or Restart Review and Type of Review Required

5.1.1 PMs must work with their contractor counterparts to identify the specific startups using Appendix I Review Needs Determination. This evaluation must occur early in the planning phase of a project and should be done at least one year before the planned startup or restart date.

Note: When PM is used without a descriptive adjective, e.g., contractor PM, it should be understood that this is a reference to the DOE EM PM.

5.1.2 Non-Nuclear Facilities, Radiological Facilities, and other Industrial Facilities, the final decision on the recommended startup or restart activities, as well as the type of review required, will be made by the PMs in conjunction with TSAD (Technical Support & Assessment Division).

5.1.3 For nuclear facilities, the final decision on the type of review to be performed and the required startup authority will be reflected in the SNR. The SNR must be approved by the appropriate authorization authority.

5.1.4 Review needs will be translated by the TSAD into the EM Assessment Schedule as defined in Section 5.2.

5.2 Scheduling

5.2.1 Assessment Schedule will be maintained by the TSAD listing planned startup or restart reviews and review dates. The schedule will be updated monthly to reflect changing conditions and made available to EM staff via hard copy or electronic transmission.

5.3 Review Planning and Documentation

5.3.1 For EM, TSAD will coordinate the planning and implementation of all readiness reviews

If an FRR is to be conducted, skip to section 5.3.5

5.3.2 ORRs/RAs will be planned and conducted in accordance with DOE Order 425.1C. The guidance provided in DOE Standard DOE-STD-3006-2000 will also be used during the planning stages of ORRs. Additional clarifications and instructions to these established procedures are set out below.

5.3.3 Plan of Action: TSAD staff will work with the PM to ensure that all required POAs (contractor and ORO) are prepared in accordance with DOE Directive requirements (a checklist that lists required elements of a POA is provided in Appendix II). POAs must contain the elements shown in Appendix II. MCRs should be reviewed for their applicability, and then tailored to the specific startup or restart.

5.3.3.1 For RAs, Simplification of the process is strongly encouraged through the use of checklists and other streamlined review tools. However, all review approaches must be documented in the POAs and then further defined in the RA Implementation Plan. A detailed analysis of the MCRs contained in DOE Order DOE O 425.1C is not required for a RA

5.3.4 Management Self Assessment: The EM MSA is an optional internal review conducted by the line organization for the purpose of confirming readiness. If an MSA is used, it should be conducted by line management with support from the appropriate facility representative and subject matter experts. The approach and methodology for the conduct of the MSA will be defined in an MSA Plan. The MSA Plan should contain, at a minimum:

[a] verification that the contractor readiness process was adequate for verifying readiness with respect to the MCRs and prerequisites, and that ORO matrix support and EM line management programs are fully functional and staffed with qualified personnel;
[b] a format for documenting findings and transmitting these to the contractor for CAs;
[c] a process for verification of MSA finding closure; and
[d] a format for documenting the overall results of the MSA.

5.3.5 Implementation Plan: The review Team Leader will coordinate the development of a review plan to include the following elements:

[a] objective of the review;
[b] background of the facility/activity which includes;
- brief description of the activity under review;
- brief description of the program organization, EM and contractor; and
- hazard classification and category of the facility/activity (e.g., radiological, high hazard non-nuclear, etc.).

[c] breadth of the review including functional areas to be reviewed;
[d] review approach which includes;
- startup authority;
- schedule and team composition;
- readiness criteria (see 5.3.6 below);
- prerequisites for the start of the FRR;
- conduct of the review, i.e., methods by which criteria will be evaluated; and
- CA verification process.

[e] process for team certification of readiness and startup authorization;
[f] requirements for the final report; and
[g] requirements for recordkeeping.

5.3.5.1 Implementation Plans will be coordinated with the PM and Facility Representative.

5.3.5.2 Copies of the final Implementation Plan will be provided to each team member, the responsible EM and contractor PMs.

5.3.6 Readiness Criteria: Adequate establishment of the readiness criteria is most crucial since this is a core of the review and the key to safe work startup or restart.

5.3.6.1 For an ORR, these consist of the MCRs identified in the plan of action. Criteria and Review Approach Documents (CRADs) will be developed by the team members for their MCRs.

5.3.6.2 For an RA, these consist of criteria identified in the POA. Specific lines of inquiry may be developed by the review team.

5.3.6.3 For an FRR, these established in the implementation plan as lines of inquiry and are developed by the review team.

5.3.7 Readiness to Proceed (Certificate of Readiness): The PM must obtain a Readiness to Proceed letter from the contractor before the EM ORR/RA/FRR can be initiated. The contractor letter must state that the contractor ORR/RA/FRR has been completed and that the contractor is ready to assume operation of the facility/activity under review.

5.3.7.1 For ORRs and RAs, the PM will prepare a memorandum to the Startup Authority (see Table I-1, Approval Authority Determination Table, for designation of the Startup Authority) requesting that the ORR/RA be started; the review team lead must be copied on this letter. The memorandum must contain a copy of the contractor

Readiness to Proceed letter and verify EM readiness. The memorandum may contain a manageable list of open pre-start findings.

5.3.7.2 For FRRs, the PM will notify the FRR team lead that the review may begin.

5.4 Conduct of the Review

5.4.1 The review will be conducted in accordance with the Implementation Plan.

5.4.2 An in-briefing meeting will be held at the onset of each review to discuss logistics and to introduce team members to their contractor counterparts. The in-brief meeting will be coordinated by the review team lead.

5.4.3 Review team members must conduct a sufficient level of review to verify that all readiness criteria have been met, or that sufficient justification is in place for instances where a given requirement is determined not to be applicable.

5.4.4 Review team members must be able to document that they have verified acceptability or non-acceptability of the readiness criteria. This verification can be done by using of a rigorous log keeping to record observations and interviews, using checklists, or reproducing the documentation that demonstrates readiness.

5.4.5 Review team meetings will be held, as appropriate, to ensure close communication of issues to the Team Leader and to identify widespread or systematic problems that may cross several disciplinary areas. Team members will ensure close communication with the EM and contractor PMs during the conduct of the review.

5.4.6 Deficiencies noted during the review will be communicated verbally to the contractor program staff as they are noted in order to maximize the opportunity for CA. Form 2, the Deficiency Form (a sample of this form is included in Appendix III), will be used to document findings or observations. Each Form 2 prepared identifies an issue related to a particular functional area or objective which is not met. Findings are defined as deviations from requirements, standards, or internal procedures. Observations are deviations from Best Management Practices or represent minor procedural deviations. All findings and observations must be categorized as either pre-start or post-start findings or observations.

5.4.7 At the conclusion of the review, the Team Leader will conduct an exit meeting at which a draft copy of all pre-start and post-start findings and observations will be presented. The contractor must use the information presented in this meeting as a basis for initiation or continuation of program CAs.

5.4.8 After completion of the review, TSAD will work with the responsible PM to ensure development and approval of a written Corrective Action Plan (CAP), and to verify closure of pre-start findings. The actions that are taken to verify closure of pre-start findings will be documented on a Finding Resolution Form, (Form 3, see Appendix IV). A contractor CAP for post-start findings will also be approved by the PM. Post-start CAs will be tracked in the ORO corrective action tracking system, ORION2.

5.4.9 After closure of all pre-start CAs and approval of CAs for post-start findings from the review, the PM will prepare a Startup Authorization memorandum for signature by the Startup Authority. For ORRs/RAs, the memorandum must contain a statement that the operational readiness process required by DOE Order DOE O 425.1C has been completed, that all pre-start findings have been verified closed, and that an acceptable CAP is being tracked for post-start findings.

5.4.10 Upon signature of the Startup Authorization memorandum, the facility/activity may be started or restarted.

5.4.11 Final Report Development

5.4.11.1 The review Team Leader will collect all input from team members and finalize a report within two weeks of the review completion.

5.4.11.2 The Report will include the following information:

[a] objective of the review;

[b] scope includes;

- functional areas reviewed;
- names of Team Leader and team members and their respective areas of review responsibility;
- actual dates of the review; and
- summary of review approaches that were used;

[c] results of the review, including summaries of readiness by functional review area (e.g., Personnel and Training, Procedures and Management Controls, Facilities and Equipment, pre-start and post-start findings); and conclusion.

5.4.11.3 The Final Reports have specific content and format requirements. Refer to DOE STD 3006-2000, Section 5.9.3.1 for the ORR Final Report format requirements.

5.4.12 TSAD will maintain an evidence file for each assessment to be filed in the QA record keeping system. Documentation will include sign in sheets for the opening and closing meetings for the ORR, the POA, Implementation Plan, information provided at the closeout meeting, the final ORR report, correspondence, and any closure documentation.

5.4.13 The review Team Lead will ensure that the final report and findings are entered into ORION2 within one week of completion of the ORR.

5.5 Composition, Training, and Qualifications of ORR, RA, and FRR Teams

5.5.1 Team Composition: Startup or restart reviews will be led and performed by personnel that not directly involved with conducting, supervising, or managing the activity being evaluated. PMs, Facility Representatives, and other ORO personnel (including support contractors), responsible for the evaluation of program activities may participate as observers or subject matter experts (SMEs). Team Leaders for ORRs must not be from offices with direct line management responsibility for the work being reviewed as required by DOE Order DOE O 425.1C. Team Leaders for RAs and FRRs

can be within the EM line management, but must be independent of the work that they are reviewing.

5.5.2 Assessment Personnel Qualifications: Assessment personnel must have technical knowledge of the area assigned to evaluate, and knowledgeable of evaluation processes and methods. This knowledge may be gained through experience or appropriate training.

5.5.3 Team Leader Qualifications: All Team Leaders for startup or restart reviews must have the personal attributes, skills, and experience to manage all phases of the assessment. To maintain team lead status, they must participate in at least three startup or restart reviews every two years. Additionally, team leads should have successfully completed a formal lead auditor training course based on a recognized standard (ISO, NQA-1, DOE Orders, ASQC).

6.0 RECORD KEEPING

The POAs, Implementation Plans, assessment plans, review reports, CAPs, and other formal assessment correspondence are considered quality records and will be retained for at least three years in the EM Quality Assurance Record Keeping system. Thereafter, final retention will be the responsibility of the ORO Records Management Program.

7.0 APPENDICES/TABLES

7.1 Appendix I: Review Needs Determinations
7.2 Table I-1: Approval Authority Determination Table
7.3 Appendix II: Operational Readiness Review and Readiness Assessment Plan-of-Action Checklist
7.4 Appendix III: Deficiency Form (Form 2)
7.5 Appendix IV Finding Resolution Form (Form 3)
7.6 Appendix V: ORR/RA/FRR Approval

Appendix I

REVIEW NEEDS DETERMINATIONS

A. Startup or Restart Review Needs Determination for Category 1, 2, and 3 Nuclear Facilities

Step 1: Ensure that the action is considered a "startup" or "restart."

As defined in DOE Standard DOE-STD-3006-2000, PLANNING AND CONDUCT OF OPERATIONAL READINESS REVIEWS (ORR), a startup is "the initial operation of a facility or process to perform program work" and a restart is "the recommencement of program work." The Standard further defines Program Work as: "Work in a reactor or nonreactor nuclear facility that is accomplished to further the goals of the facility mission and/or the program for which the facility is operated. Program work is not accomplished when a facility is shutdown. Program work does not include work that would be required to maintain the facility in a safe shutdown condition, minimize radioactive materials storage, or accomplish modifications and correct deficiencies required before program work can recommence."

Step 2: Ensure that the facility/activity is a nuclear facility/activity and determine its hazard category.

NOTE: An activity conducted within a nuclear facility *does not necessarily mean that it is a nuclear activity.* One must evaluate the actual risks and quantities of nuclear materials involved in the specific activity. DOE Standard DOE-STD-1027-92, *HAZARD CATEGORIZATION AND ACCIDENT ANALYSIS TECHNIQUES FOR COMPLIANCE WITH DOE ORDER 5480.23, NUCLEAR SAFETY ANALYSIS REPORTS*, should be consulted for guidance in determining if the facility is a nuclear facility and, if so, its hazard category.

Step 3: Determine if a facility/activity is being restarted following a shutdown; if not, go to Step 4. Determine if the shutdown was caused by a safety related issue (management directed or due to operations outside of the safety basis). If the shutdown was due to normal planned cessation of operations, e.g., a maintenance outage, determine the length of time that the operation has been shut down. Go to Table I-1 to determine review need.

Step 4: Determine if the facility/activity startup or restart is a New Facility/Activity Startup or a Restart Following a Modification to an Existing Facility/Activity. This step will require some interpretation and professional judgment. If the facility/activity is a New Facility/Activity, go to Table I-1 for determination of review need and startup authority. If the startup or restart is a Modification to an Existing Facility/Activity, go to Step 5.

NOTE: The start of a new unit process or a new operation does not necessarily mean that the startup action is a New Facility/Activity startup action. If the facility being started is a new unit process that is a component or part of a larger operating system (e.g., a new treatment unit on an existing wastewater treatment system), the startup may be considered a Facility Modification. Similarly, if the startup of a new EM field activity is part of a larger existing field operation or program, it may also be an Activity Modification (e.g., a new enriched uranium removal process that is part of an existing uranium deposit removal program). However, if the facility/activity involves a new contractor, new management system, new physical components/structures, or new safety authorization basis, the facility/activity startup will likely be considered a New Facility/Activity.

Step 5: Determine if the Facility Modification is a Major or Minor modification.

Major modifications could include, but are not limited to:

(1) substantial changes that would create new and un-reviewed risks to worker/public safety;
(2) changes that would result in a substantial public or regulatory relations risk;
(3) a substantial increase in risks to worker/public safety even though the risk scenario has been previously reviewed and included in facility safety documents; and
(4) major organizational or management system changes for the operation of a nuclear facility/activity (e.g., the operation of a nuclear facility is turned over to a new contractor who chooses to have a large scale change of staffing and procedures).

Minor modifications could include, but are not limited to:

(1) changes that create no new and un-reviewed risks and that do not substantially result in an increase in risk;
(2) the addition of new processes or activities to an existing facility/activity that are covered under the existing safety authorization basis; and
(3) modifications that is similar to previous modifications that have been successfully implemented.

If the facility/activity involves a major modification, go to Table I-1 to determine review need. If the facility/activity involves a minor modification, the restart will be considered in the "Other Restarts" category.

B. Review Needs Determinations Involving Non-Nuclear, Radiological, and Other Industrial Facilities

Step 1: Ensure that the facility is NOT a nuclear facility.

Step 2: If the program involves a sufficient risk to worker/public safety, environmental protection, financial security, national security, or public relations, an ORO FRR should be performed. The level of review and documentation of the FRR can approach that of an ORO ORR and should be conducted if program risks warrant such a review, and if ORO Management approves of this review course. If the program does not warrant an ORO FRR, the program should be started following routine contractor readiness verification processes.

TABLE I-1

APPROVAL AUTHORITY DETERMINATION TABLE

	TYPE OF STARTUP OR RESTART					
Category and Classification of Facility/ Activity	**New Facility or Activity**	**Restart with Major Modifications**	**Shutdown Caused by Operations Outside Safety Basis**	**DOE Management Directed, Unplanned Shutdown**	**Restart after extended shutdown******	**Other Restarts**
Nuclear, Category 1	ORR (Secretary of Energy)*	ORR (HQ Secretarial Officer)*	ORR (Startup Authority)**	ORR (Shutdown Official)***	ORR (HQ Secretarial Officer)	RA (AMEM)*
Nuclear, Category 2	ORR (Secretary of Energy)*	ORR (HQ Secretarial Officer)*	ORR (Startup Authority)**	ORR (Shutdown Official)***	ORR (HQ Secretarial Officer)	RA (AMEM)*
Nuclear, Category 3	ORR (HQ Secretarial Officer)*	RA (AMEM)*	ORR (Startup Authority)**	ORR (Shutdown Official)***	RA (AMEM)*	RA (AMEM)*

* Or designee

** Startup authority is the official designated to approve the safety basis which was violated.

*** The DOE official who is responsible for the unplanned shutdown.

**** Extended shutdown for a Category 1 Nuclear Facility is 6 months. Extended shutdown for Category 2 and 3 Nuclear Facilities is 12 months. Extended shutdown for non-nuclear, radiological, and other industrial facilities is 18 months.

Appendix II

OPERATIONAL READINESS REVIEW AND READINESS ASSESSMENT PLAN-OF-ACTION CHECKLIST

The plan-of-action should clearly delineate management responsibilities, authority, and accountability for the ORR (as specified in the DOE O 425.1C) and include the following:

ELEMENT	COMPLY (YES/NO)	JUSTIFICATION
Notice of the intent to conduct an ORR		
Identification and description of the facility		
Team Leader		
Prerequisites		
Define the breadth of the review		
Estimated start date(s) of the review		
Estimated time needed to conduct the review		

Appendix III

DEFICIENCY FORM
(FORM 2)

Functional Area:	Objective No.:	Finding/ Observation	Pre-start Post-start	Issue No.: Rev. No.: Date:

ISSUE:

REQUIREMENT:

REFERENCE(S):

DISCUSSION:

Inspector:_____	Approved: _____ Team Leader

Appendix IV

FINDING RESOLUTION FORM (FORM 3)

Functional Area: Emergency Preparedness	Objective No.: EP-1	Issue No.: EP-1-1
ISSUE: Finding Designation: Prestart Poststart		
Date Received: Responsible Individual: Phone#:		

Action Plan:

Resolution:

Corrective Action Completion

Verified By: _____	Date:
Verified By: _____	Date:

APPROVAL

[Operational Readiness Review/Readiness Assessment/Field Readiness Review]

Subject Activity: _____

I, by signature here, acknowledge that I concur with the Team Leader in the findings and conclusions of this [Operational Readiness Review/Readiness Assessment/Field Readiness Review] for [Activity].

_____ _____
Team Member Date

_____ _____
Team Member Date

_____ _____
Team Member Date

_____ _____
Team Member Date

_____ _____
Team Member Date

APPROVED:

_____ _____
Team Leader Date